REMARKS

This response cancels claims 13-51 as directed to a non-elected invention. Claims 3, 7, 8 and 11 and 12 have also been canceled. This response amends claims 1, 2, 4, 5, 6, 9, and 10 and adds new claims 57-70. Claims 52-56 have not been amended.

Claims 1, 2, 4, 5, 6, 9, and 10 have been amended to exclude 5-Br-IAA from the list of IAA derivatives in the compositions claimed. Claims directed to compositions comprising 5-Br-IAA have been canceled. The IAA derivative 5-Br-IAA is specially recited in the specification as a member of the IAA derivatives and this recitation provides specific support for the exclusion of this compound from the claims.

New claims 57-60 depend from claim 52 are directed to a kit for production of embryogenic callus. The specific recitations of claims 57-60 are supported in the specification, particularly in the Tables 1-6 in the Examples section of the specification. New claims 61-70 depend from claim 54 and are directed to a kit for regeneration of a plant. In new claim 61, 5-Br-IAA has been excluded from the list of IAA derivatives. Support for this exclusion is based on the specific recitation of 5-Br-IAA as an IAA derivative. Support for the remaining claims is found in the original claims or in the Examples section of the specification.

The restriction requirement has been made final and Applicant has canceled withdrawn claims 13-51. New claims 57-70 depend from claims within the group of claims that have been elected, read on the elected species and should be considered within that group for restriction and prosecution.

The present invention claims priority under 35 U.S.C § 119(e) to U.S. provisional application 60/188,268 filed March 10, 2000. A paragraph referring to this priority document was added by preliminary amendment filed June 28, 2001. Applicant's records indicate that the preliminary amendment was received by the Patent Office on July 2, 2001. If that preliminary amendment has been lost or not matched with the file, Applicant respectfully requests that the Examiner contact the undersigned attorney for another copy of the amendment.

The claims have been rejected over claims 1-22 of U.S. 5,674,731 under the judicially created doctrine of obviousness-type double patenting. Applicant respectfully traverses this rejection in view of the amendment of the claims.

Claims 1-22 of U.S. 5,674,731 are directed to a composition for enhancing the growth of a plant comprising an effective amount of 5-Br-IAA and methods for enhancing growth employing the composition claimed.

Claims under consideration herein are directed to a composition that affects plant growth, to kits for the generation of embryogenic callus and to kits for the regeneration of plants. The composition claims have been amended to exclude 5-Br-IAA from the list of IAA derivatives that may be comprised within the composition.

In a rejection based on obviousness-type double patenting only the claims and not the specification as a whole can be employed in the determination of obviousness. In this case, claims 1-22 of the '731 patent teach nothing and suggest nothing about the use of IAA derivatives other than 5-Br-IAA for affecting growth of a plant. Claims 1-22 of the '731 teach nothing and suggest about the use of any compounds for the regeneration of plants and teach nothing and suggest nothing about the use of any compounds for the production of embryogenic callus.

Applicant wishes to emphasize that embryogenic callus is morphologically and functional different from callus. Materials and methods employed for the growth of callus would not be the same as those used to produced the desirable morphology and function of embryogenic callus.

The Examiner has stated that "the methods claimed" in the patent render obvious any newly claimed plant affecting use of the claimed auxin. The auxin claimed in the patent is 5-Br-IAA. The methods claimed are generically directed to affecting plant growth. The method claims of the '731 patent do not teach or suggest anything concerning plant regeneration or the generation of embryogenic callus. Applicants further note that the claims under consideration herein are claims to compositions and to kits combining elements for use for specific applications. Those specific applications for which the kits are specifically adapted are not taught or suggested by the claims of the '731 patent.

The Examiner has given no basis why the composition claims of the '731 patent which comprise a specific IAA, 5-Br-IAA, would obviate Applicant's amended

composition claims which exclude 5-Br-IAA. In the absence of a basis for this rejection, the rejection is improper and should be withdrawn.

Because claims 1-22 of the cited patent do not teach or suggest any of the subject matter currently being claimed this rejection should be withdrawn and a terminal disclaimer should not be required.

The Examiner indicates that there is an issue of priority under 35 U.S.C. 102(g) and possibly under U.S.C. 102(f). The Examiner has required that Applicant state which entity is the prior inventor of the conflicting subject matter in the current claims and those of the '731 patent. This requirement is based on the Examiner's finding that there is "conflicting subject matter" claimed in the '731 patent and in the claims under consideration in the present application. Applicants respectfully traverse any requirement to state priority of invention in this case with respect to the claims as amended. The composition claims have been amended to exclude the IAA derivative 5-Br-IAA which is the only derivative in the '731 patent claims. Applicant submits that the cited patent and the claims now under consideration do not contain "conflicting subject matter."

As noted above, claims 1-22 of the '731 patent are directed to compositions for affecting plant growth and to a method for affecting plant growth employing the claimed growth affecting composition. The growth affecting composition of the '731 patent comprises 5-Br-IAA. The growth affecting compositions of the present claims exclude 5-Br-IAA and thus do not overlap in subject matter with the composition claims of the '731 patent. The remaining claims under consideration are directed to kits for regeneration of plant tissue and to kits for the production of embryogenic callus. None of the claims of the '731 patent are directed to such kits. There is thus no conflicting subject matter between the claims of the present case as amended and those of the issue '731 patent.

Applicants submit that the cited patent and the reasoning presented on the record do not demonstrate the existence of conflicting subject matter in this application and the cited patent and do not provide a basis supporting a rejection under either 102(f) or 102(g). Thus, the requirement to provide a statement concerning priority of invention is improper.

Claims1-12 and 52-56 are rejected under 35 U.S.C. 102(b) as anticipated by Engvild (1978).

Engvild is characterized as teaching compositions of 5-Br-IAA and other substituted IAA's which affect the growth of plants.

Applicants respectfully traverse this rejection in view of the amendments to the claims.

Engvild (1978) is not an enabling reference for the demonstration of auxin activity in any of the compounds discussed therein. Engvild tested certain substituted indoleacetic acids, in two different assays, but neither of the assays employed constitutes a proper assay as recognized in the art for determining auxin activity.

The generally accepted method for determining auxin activity is to measure plant growth characteristics as a function of application of compounds to be tested. In contrast, Engvild evaluates auxin activity by measuring inhibition of shoot formation. In Table 1 of the reference, the ability of various tested compounds to inhibit shoot formation is examined. In this test IAA is shown to inhibit shoot formation at concentrations of 10^{-6} and 10^{-5} M.. The art prior to Engvild teaches that IAA has auxin activity because it promotes shoot formation in tobacco cultures at concentrations of 10^{-8} to 10^{-4}M. The inhibitory effects that may be observed with higher concentrations of auxins have been attributed to the production of ethylene; if production of ethylene is prevented the inhibitory effect is no longer observed (Davies (1995) Plant Hormones (Davies, ed.) Kluwer Academic Publishers, Dordrecht, The Netherlands, pp. 1-12).

In the test employed by Engvild, other known auxins (2,4-D and NAA) show different results from that of IAA: 2,4-D shows no shoot formation at any of the concentrations examined and NAA shows high levels of shoot formation at lower concentrations, but none at 10^{-5} M. The results presented in Table 1 of Engvild, thus, are not consistent with teachings in art with regard to activity of known auxins. In view of these inconsistencies, the assays employed by Engvild can not be seen as proper methods

for testing for auxin activity of any compound. For this reason, Engvild can not be considered an enabling reference with respect to a demonstration of auxin activity for any of the compounds discussed therein.

Applicants further note that the Engvild reference states in the discussion section of the reference referring to results of combining the test compounds with a cytokinin that "growth was variable and not a good measure of auxin activity" and that "callus growth was apparently determined mainly by cytokinin." Thus, the authors appear to admit that auxin activity and growth effects were not properly measured in their tests.

This rejection should be withdrawn because it is based on a non-enabling reference (Engvild).

Claims 1-12 and 52-56 are rejected under 35 U.S.C. 102(b, e, f and g) as being anticipated by Lin et al. 5,674,731. Applicants respectfully traverse this rejection in view of the amended claims.

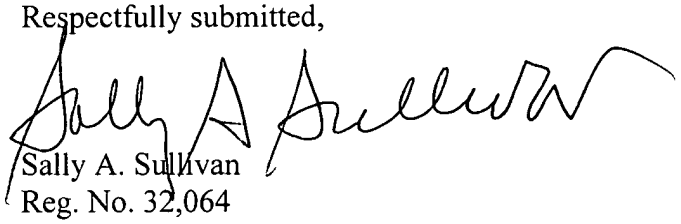
The Examiner has stated that the basis of this rejection is that Lin et al. claims compositions of 5-Br-IAA and that the cited patent anticipates the subject matter claimed in the application. Applicants have amended the claims to growth affecting compositions to exclude compositions that comprise 5-Br-IAA. Thus, the composition claims as amended are not anticipated by the cited reference.

The Examiner has given no basis for the rejection of Applicant's claims to kits. The cited patent does not claim any kits. The Examiner has not provided any reasoning on the record as to why the cited patent teaches the kits as claimed by Applicant. Since no basis for this aspect of the invention has been given the rejection is improper and should be withdrawn.

With respect to issues under 35 U.S.C. 102(f and g), Applicants have discussed above the fact that the claims of the cited patent and those currently under consideration in this application do not contain "conflicting subject matter." Applicant's statements above indicate that there is not basis in the Office Action to support a rejection under either of 35 U.S.C 102(f) or 102(g).

This Response is accompanied by a Petition for Extension of Time of three months and requisite fee. If the enclosed fee is incorrect, please charge any deficiency or credit any overpayment to deposit account 07-1969.

Respectfully submitted,



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